

# Hybrid Professional Master's Degree

## Trauma Emergencies





## Hybrid Professional Master's Degree Trauma Emergencies

Modality: Hybrid (Online + Clinical Internship)

Duration: 12 months

Certificate: TECH Global University

60 + 5 créditos ECTS

Website: [www.techtute.com/us/medicine/hybrid-professional-master-degree/hybrid-professional-master-degree-trauma-emergencies](http://www.techtute.com/us/medicine/hybrid-professional-master-degree/hybrid-professional-master-degree-trauma-emergencies)

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# 01

# Introduction

Emergency services have undergone major changes in recent times in response to new healthcare challenges. Therefore, these transformations have been based on the incorporation of new protocols and techniques that have positively affected the management of trauma injuries. That is why it is necessary for the specialist to be able to integrate the latest procedures in the approach of this type of patients in their daily work and, for this reason, this program is offered. With this degree, the physician will not only be able to update their knowledge conveniently and quickly, but will also have access to an on-site clinical internship in a center of renowned prestige, so that they can update their knowledge in a practical way, by interacting with real patients to whom they will apply the most cutting-edge procedures.





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*Get up-to-date in traumatologic emergencies thanks to this program, with which you will be able to carry out a practical internship of 3 weeks in a clinical center of recognized prestige”*

The recent health situation has caused transformations in various medical services, which have had to adapt not only to new protocols, but also to new procedures in different areas. Therefore, one of the areas that has undergone the greatest changes is traumatology, which continues to be one of the most requested services in hospital emergency departments.

In this way, in recent years the Traumatology Emergency Department has evolved, providing the specialist with new techniques with which to deal with the most common injuries as well as the most specific and infrequent ones. For this reason, this Hybrid Professional Master's Degree in Trauma Emergencies is presented as a great option to update the physician, since it will provide the latest scientific evidence on aspects such as acromio-clavicular injuries, acetabular fractures, burst fractures of the spine or Lisfranc injury.

The learning will be carried out in two phases, the first of which will be developed in a 100% online format, while the second will consist of 3 weeks of on-site stay in a clinical center. Therefore, during the online phase, the specialist will enjoy the accompaniment of great professionals with extensive experience in Trauma Emergencies, who will transfer the latest developments in the discipline from numerous multimedia resources: video procedures, clinical case studies, master classes or interactive summaries.

At the end of the distance learning, the physician will carry out an internship in a prestigious center, where they will be able to update their skills with real patients, under the guidance of specialists from the hospital itself. They will also carry out a minimum number of activities, which guarantees that this internship is a great opportunity to learn about and use the most advanced methods in this health field.

This **Hybrid Professional Master's Degree in Trauma Emergencies** contains the most complete and up-to-date scientific program on the market. The most important features include:

- More than 100 clinical cases presented by professionals in Traumatology
- The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- Analysis of the best methods of assessment and monitoring of the trauma patient
- Comprehensive systematized action plans for the main pathologies in the traumatology unit
- Presentation of practical workshops on diagnostic and therapeutic techniques in the trauma patient
- An algorithm-based interactive learning system for decision-making in the clinical situations presented throughout the course
- Practical clinical guides on approaching different lesions
- Special emphasis on test-based medicine and research methodologies in Traumatology
- All of this will be complemented by theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- Content that is accessible from any fixed or portable device with an Internet connection
- Additionally, students will be able to carry out a clinical internship in one of the best hospitals in Spain

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*You will be able to add to the online period a practical stay in which you will come into contact with real patients, ensuring that your learning is the most effective”*

This Master's program, which has a professionalizing nature and a hybrid learning modality, is aimed at updating medical professionals who perform their functions in emergency and trauma units, and who require a high level of qualification. The contents are based on the latest scientific evidence, and oriented in a educational way to integrate theoretical knowledge in the professional medical practice, and the theoretical-practical elements will facilitate the updating of knowledge and allow decision-making in patient management.

Thanks to the multimedia content, developed with the latest educational technology, medical professionals will benefit from situated and contextual learning, i.e., a simulated environment that will provide immersive learning programmed to train in real situations. This program is designed around Problem-Based Learning, whereby the physician must try to solve the different professional practice situations that arise during the course. For this purpose, the student will be assisted by an innovative interactive video system created by renowned experts.

*You will be able to add to the online period a practical stay in which you will come into contact with real patients, ensuring that your learning is the most effective.*

*You will have access to the most advanced knowledge on issues such as sedation in pediatric patients or the approach to humeral condyle fracture.*



# 02

## Why Study this Hybrid Professional Master's Degree?

The Emergency Department is always demanding and, when it comes to trauma pathologies, it requires specialists who can make decisions and take a quick and accurate course of action. For this reason, it is essential to know the latest developments in the field, although the theory often does not go along with its own practical application. Therefore TECH has created this degree, where the specialist will have access to both the most cutting-edge theory in Trauma Emergencies and its own practical application, in an advantageous on-site stay that will last 3 weeks and where they will be accompanied and advised by a team of experts.







Why Study this Hybrid Professional | 09  
Master's Degree?

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*Take your skills in the area of Trauma Emergencies to the most advanced practice and theory of the area thanks to this Hybrid Professional Master's Degree”*

### 1. Updating from the latest technology available

The latest technology in surgical interventions and accurate diagnosis is essential when it comes to outlining a correct and holistic approach. Therefore, both in theory and in practice, the most advanced techniques in Trauma Emergencies will be addressed, giving the specialist access to the most effective interventions currently available.

### 2. Gaining In-Depth Knowledge from the Experience of Top Specialists

Thanks to the specialists' experience who have written all the theoretical content, as well as that of the experts who accompany the student during the practical internship, the program is much more rewarding and demanding for the student. The student will be able to nurture and receive feedback from highly qualified professionals in the area of diagnosis and treatment of all types of Trauma Emergencies.

### 3. Entering First-Class Clinical Environments

TECH carefully selects all the clinical centers available in its programs, so that the specialist is guaranteed access to a first-class practical space. Not only will they have access to the knowledge of experts in Trauma Emergencies or to the latest technology available in surgery and diagnosis, but they will also be involved in a demanding work team, where they will be able to update their knowledge in a reliable way.







#### 4. Combining the Best Theory with State-of-the-Art Practice

Thanks to the combination of the latest scientific postulates available in the field of traumatology with the most rigorous practice, the specialist who completes this program will obtain a global and advanced vision of the area. Therefore, after graduation, they will have completed a demanding, but at the same time rewarding, updating process, since all the knowledge can be applied immediately in their own area of work.

#### 5. Expanding the Boundaries of Knowledge

The work of updating the professional in the emergency area is always constant, so when it comes to specific specialties such as traumatology, it is even more relevant to offer the most important scientific content. In this Hybrid Professional Master's Degree the specialist can expand their practical skills in a decisive way, relying on both the best theory and the most effective practical immersion.



*You will have full practical immersion  
at the center of your choice"*

# 03 Objectives

The main objective of this Hybrid Professional Master's Degree in Trauma Emergencies is to provide the specialist with the most advanced knowledge in this area, and to achieve it, it offers an online learning phase with which they can obtain the latest procedures in this discipline and, later, an on-site and intensive internship in a health center of recognized prestige where they can put into practice all the skills acquired.







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*Get up-to-date in a convenient and practical way with this Hybrid Professional Master's Degree, specially designed to update the working professional”*



## General Objective

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- The increase in the complexity of Trauma Emergencies has made it necessary for the specialist to be constantly up-to-date in order to respond to the present and future challenges of the discipline. Therefore, this program is presented as the best option to get up to date, so that all its resources are focused on achieving this goal

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*The objective of this program is to provide the physician with everything they need to be up-to-date with the most precise procedures in traumatology, so its contents have been updated according to the latest scientific evidence”*





## Specific Objectives

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### Module 1. Holistic Approach to Patients in Trauma Emergencies

- ◆ Learn to establish an order, method and system of a holistic approach to patients with acute pathology and trauma
- ◆ Write an emergency discharge report after patient care that is sufficient and succinct, along with recommendations to clarify the common doubts that arise in the patient, and that in many occasions make them return to the emergency department
- ◆ Establish the differences between patients polytraumatized, polyconcussion and polyfractured

### Module 2. Orthopedic Examination in the Emergency Department

- ◆ Learn how to develop the skills required to perform fast, accurate and safe examinations in patients with acute or emergency pathology of traumatic origin through educational videos
- ◆ Update knowledge on immobilization techniques and treatment of the most frequent fractures and injuries in acute pathology and trauma emergencies through educational videos
- ◆ Delve into the segmental and peripheral neurological examination of the most common orthopedic consultations in the emergency department



### Module 3. Upper Limb Trauma Emergencies

- ◆ Learn to identify and care for the most common injuries to the pelvis, hip, thigh and leg
- ◆ Delve into the diagnosis and therapeutic strategy of acetabular fractures
- ◆ Understand hip dislocation and hip prosthesis and understand how to perform a correct orthopedic management

### Module 4. Trauma Emergencies of the Pelvis and Lower Limbs

- ◆ Identify and treat the most frequent lesions in the upper limb
- ◆ Effectively diagnose traumatic lesions of the upper extremity
- ◆ Integrate the approach to the different types of fractures and dislocations common in emergency orthopedic consultations

### Module 5. Ankle and Foot Emergencies

- ◆ Identify and treat the most common ankle and foot injuries
- ◆ Develop the injury biomechanics of Achilles tendon rupture

### Module 6. Trauma Emergencies in Children

- ◆ Identify and care for the most frequent acute traumatic injuries in pediatrics
- ◆ Delve into the sedation of pediatric patients
- ◆ Favor the correct immobilization in the pediatric patient, developing the challenges in the placement of immobilization systems, the capacity of understanding and tolerance







### **Module 7. Spinal Trauma Emergencies**

- ◆ Identify and care for the most common acute traumatic spinal injuries
- ◆ Describe Trauma Emergencies such as incomplete spinal cord injury or cauda equina syndrome
- ◆ Assess fractures in patients with ankylosing spondylitis

### **Module 8. Musculoskeletal Ultrasound and Radiological Studies in Trauma Emergencies**

- ◆ Learn the practical applications of ultrasound, both for the rapid diagnostic approach and in support of invasive techniques in trauma emergency
- ◆ Develop a systematic approach to reading imaging studies commonly used during emergency trauma care
- ◆ Promote higher resolution imaging studies indicated in the emergency department

### **Module 9. Nursing in Trauma Emergencies**

- ◆ Describe the compressive bandages after trauma surgeries, as well as the placement and care of the dressing
- ◆ Define minor and early complications after surgery in the trauma emergency department
- ◆ Define asepsis and antisepsis in Trauma Emergencies

# 04 Skills

Thanks to this Hybrid Professional Master's Degree in Trauma Emergencies, the professional has the opportunity to incorporate new competencies to their daily work with which to accurately address the complex injuries of this medical area. Therefore, throughout the program, the specialist will incorporate new skills and procedures to their work, being able to apply them immediately once the degree is completed.





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*Incorporate into your daily work, thanks to this program, the most advanced diagnostic techniques and treatments in the area of traumatology”*





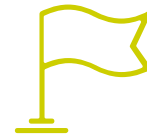
## General Skills

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- ♦ Possess and understand the knowledge that provides a basis or opportunity to be original in the development or optimization of techniques within trauma emergency care
- ♦ Apply the acquired knowledge and problem-solving skills in highly demanding and stressful environments, within multidisciplinary contexts in the care of acute and urgent pathology of traumatic etiology
- ♦ Integrate knowledge and face the complexity of making judgments based on relevant, complete, reliable and timely information
- ♦ Adequately communicate both with the patient and with other professionals, particularly when requesting interconsultations
- ♦ Possess self-directed learning skills







## Specific Skills

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- Describe the diagnostic and therapeutic processes that are common in emergency trauma care, in detail and their applications in routine clinical practice
- Identify the most frequent and urgent traumatologic injuries in the pediatric age group
- Describe the main characteristics of acute trauma injuries by anatomical region
- Incorporate new knowledge and approaches to fractures in emergency department pediatric inflammatory bowel disease
- Perform a comprehensive approach to the acute and urgent pathology of the polytraumatized patient
- Improve knowledge of the anatomy and pathophysiology of acute trauma injuries
- Value research and the incorporation of technological advances as the only way to progress in the care of acute pathology and trauma emergencies

05

# Course Management

The learning of this Hybrid Professional Master's Degree in Trauma Emergencies will be guided by great specialists in this medical area who have an enormous international prestige. Therefore, the professional enrolled in this program will have the deepest and most up-to-date knowledge, taught by a high-level teaching staff, up to date with the latest advances in this complex health discipline.





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*The most prestigious teaching staff will guide you throughout the learning process, so you will be able to learn first-hand about the latest advances in this medical area”*



## Management



### Dr. Elgeadi Saleh, Ghassan

- ♦ Specialist in Traumatology and Orthopedic Surgery, founder of the Elgeadi Clinic
- ♦ CEO and Founder of the Elgeadi Clinic
- ♦ CEO and Founder of the Institute of Advanced Spine Surgery ICAC
- ♦ Medical Director of the Emergency Unit of Traumatology and General Medicine at Santa Elena Hospital
- ♦ Head of the Traumatology and Orthopedic Surgery Service and of the Emergency Medical and Traumatology Service at several QuirónSalud hospitals
- ♦ Specialist in Emergency Traumatology and Sports Injury Surgery at Clínica Internacional Centro
- ♦ Specialist in Orthopedic Surgery and Pediatric Traumatology at the Hospital Infantil Niño Jesús
- ♦ Specialist in Musculoskeletal Oncology at the Gregorio Marañón Hospital
- ♦ Responsible for the Medical Emergency Service at IFEMA
- ♦ Degree in Medicine and Surgery from the Autonomous University of Madrid
- ♦ Specialist in Orthopedic Surgery and Traumatology at Hospital Fraternidad Muprespa and University General Hospital Gregorio Marañón
- ♦ Specialization in Advanced Reconstructive Surgery of the Upper Limb in the United States
- ♦ Specialization in Advanced Reconstructive Surgery of the Lower Limb and Surgery in Conflict Territories in Al-Khaldi International Hospital, in Jordan
- ♦ Specialization in Full Endoscopic Spine Surgery in the United States Specialization in Advanced Endoscopic Cervical and Lumbar Spine Surgery at St. Anne Hospital, Germany



### Dr. Domenech De Frutos, Santiago

- Specialist in the Traumatology Emergency Unit of the Hospital QuirónSalud Valle del Henares
- Specialist in Traumatology at Elgeadi Clinic
- Specialist in the Emergency Unit of the Vithas Hospitals
- Teacher at UltraDissection Group
- Degree in Medicine and Surgery from the University of Carabobo
- Master's Degree in Emergency Medicine, Complutense University, Madrid
- Master in Acute Pathology and Pediatric Emergencies by the Autonomous University of Madrid
- Certificate in Intensivist Echocardiography and Advanced Clinical Emergency Medicine from Harvard Medical School

## Professors

### Dr. Matas Díaz, Jose Antonio

- Specialist Physician in the area of COT at the Gregorio Marañón Hospital
- Patient safety referent of the COT service at the Gregorio Marañón Hospital
- Degree in Medicine
- Member of the Infection and Antibiotic Policy Committee and the Clinical Documentation, Operating Room and Antibiotic Policy Committee of the Gregorio Hospital

### Dr. Vaquero Martin, Javier

- Traumatologist specialized in Orthopedic Surgery
- Head of the Orthopedic Surgery and Traumatology Department at Gregorio Marañón Hospital, Madrid
- Former President of the Spanish Association of Arthroscopy
- Author of the book *Cómo prevenir y curar lesiones deportivas* (How to prevent and cure sports injuries)
- Publications in the Spanish Journal of Arthroscopy and Joint Surgery (REACA), Foot and Ankle Journal, SEMCPT Update Monographs and the Spanish Journal of Occupational Traumatology (RETLA)

#### **Dr. Forriol Campos, Francisco**

- ♦ Specialist in Orthopedic Surgery, Traumatology and Surgical Skills
- ♦ Director of the Surgical Skills Laboratory at CEU San Pablo University
- ♦ Professor of Orthopedic Surgery and Traumatology at CEU San Pablo University
- ♦ Director of the Trauma Magazine of the MAPFRE Foundation
- ♦ President of the Spanish Society of Orthopedic Surgery and Traumatology
- ♦ Consultant in the area of Orthopedic Surgery and Clinical Traumatology at the University of Navarra
- ♦ Degree in Surgery and Medicine from the University of Valencia

#### **Dr. Carbó Laso, Esther**

- ♦ Resident Doctor of the Orthopedic Surgery and Traumatology Service, General University Hospital Gregorio Marañón, Madrid
- ♦ Degree in Medicine, University of Cantabria
- ♦ Associate Professor at the Complutense University of Madrid

#### **Dr. Alcobé Bonilla, Francisco Javier**

- ♦ Medical specialist in Traumatology and Orthopedic Surgery
- ♦ Traumatology Physician in EQAL Traumatology at Nuestra Señora del Rosario Hospital
- ♦ Speaker at various national conferences and specialized congresses
- ♦ Specialist in Traumatology and Orthopedic Surgery

#### **Dr. Rodríguez, Ángel L**

- ♦ Trauma Physician Member of the Elgeadi Traumatology team
- ♦ Trauma physician
- ♦ Member of the Elgeadi Traumatology team

#### **Dr. Chana Rodríguez, Francisco**

- ♦ Specialist in Traumatology at the BiClinic Clinic
- ♦ Assistant Physician of the Department of Traumatology and Orthopedic Surgery at the General University Hospital Gregorio Marañón, Madrid
- ♦ Judicial expert of the Illustrious Official College of Physicians of Madrid
- ♦ Associate Professor of Surgical Pathology, Faculty of Medicine, Complutense University of Madrid
- ♦ Attending physician at the Department of Traumatology and Orthopedic Surgery, La Paz General University Hospital, Madrid
- ♦ Doctoral thesis on "*Study of heat shock proteins in total knee arthroplasties*", CUM LAUDE, Complutense University of Madrid
- ♦ Master's Degree in Psychosocial and Bodily Injury Expertise by the European Institute of Health and Social Welfare
- ♦ Postgraduate Certificate in Venous Thromboembolic Disease from the Autonomous University of Barcelona
- ♦ Master's Degree in Clinical Management in Specialized Care by the European Institute of Health and Social Welfare in Madrid
- ♦ Specialist in Orthopedic and Trauma Surgery
- ♦ Degree in Medicine and Surgery from the University of Salamanca



**Dr. Alarcia Pineda, José Manuel**

- ♦ Physician in charge of Traumatologic Emergencies in Traumadrid
- ♦ Physician in charge of Traumatologic Emergencies in Traumadrid
- ♦ Attending Physician in the Orthopedic Surgery and Traumatology Department of Traumadrid
- ♦ Attending Physician in Emergency Department - Traumatology at Hospital Vithas Nuestra Señora de América
- ♦ Author of several scientific publications on his medical specialty
- ♦ Expert in Emergency Medicine, Emergencies and Catastrophes by the European Institute of Health and Social Welfare

**Dr. Contreras Ojeda, Miguel Ángel**

- ♦ Specialist in Anesthesiology and Reanimation at the General Hospital Mateu Orfila
- ♦ Medical Specialist in Anesthesiology at the Hospital Metropolitano del Norte
- ♦ Physician Specialist in Anesthesiology at Policlínica Las Industrias
- ♦ Physician Specialist in Anesthesiology at the Surgical Unit III
- ♦ Medical Director of Ambulatory Rural Type I "La Alianza"
- ♦ Medical Director of Rural Outpatient Clinic Type II "Primitivo de Jesús"
- ♦ Master's Degree in Pain Treatment at the University of Salamanca
- ♦ Specialization in Anesthesiology at the Central University of Venezuela
- ♦ Degree in Medicine and Surgery from the University of Carabobo

**Dr. Meza González, José**

- ♦ Family Physician and Sports Medicine Member of the Elgeadi Traumatology team
- ♦ Family and sports medicine physician
- ♦ Member of the Elgeadi Traumatology team

**Dr. Cuevas González, Jorge Luis**

- ♦ Medical Specialist in Traumatologic Emergencies in Traumadrid del HM Puerta del Sur
- ♦ Member of the Screening in Traumatologic Pathology team of Elgeadi Traumatology
- ♦ Founder of Ultratm Medical Simulation
- ♦ Emergency Department Physician at Nisa Hospitals
- ♦ Emergency Department Physician at Santa Elena Clinic
- ♦ Emergency Department Physician at Sanitas Hospitals
- ♦ Degree in Medicine and Surgery from the University of Carabobo
- ♦ Homologation of the Title of Physician and Surgeon in Spain

**Dr. Fajardo, Mario**

- ♦ Chief Executive Officer at UltraDissection Group
- ♦ Specialist in the Chronic Pain Unit of the University Hospital QuirónSalud Madrid
- ♦ Specialist in Anesthesia at the University Hospital of Móstoles
- ♦ Coordinator of the area of Regional Anesthesia of the journal AnestesiaR
- ♦ Professor of Anatomy at the Autonomous University of Madrid
- ♦ Degree in Medicine from the University of Havana
- ♦ Specialization in Anesthesia, Resuscitation and Echoanatomy, Autonomous University of Madrid

**Dr. Gironés Muriel, Alberto**

- ◆ Coordinator of the Department of Anesthesiology and Pain Treatment at Hospital Viamed Virgen de la Paloma
- ◆ Coordinator of Anesthesiology at Hospital Sanitas La Moraleja
- ◆ Specialist in Anesthesiology at the Hospital El Escorial del IMSALUD
- ◆ Member of the editorial board of the AnesthesiaR Association
- ◆ Anesthesiologist at the MD Anderson Cancer Center Madrid
- ◆ Coordinator and developer of the website of the Association of Anesthesiologists of the Community of Madrid
- ◆ Specialist in the Maternal-Infant area of the 12 de Octubre University Hospital
- ◆ Degree in Medicine and Surgery from the University of Alcalá de Henares
- ◆ Specialization in Anesthesiology, Resuscitation and Pain at the Hospital Clínico San Carlos
- ◆ Degree in Biostatistics for Researchers from the University of Salamanca

**Dr. Rodríguez López, Tamara**

- ◆ Attending Physician at Traumadrid Orthopedic Surgery and Traumatology
- ◆ Member of the Foot and Ankle Unit at Traumadrid
- ◆ Work activity at the Jiménez Díaz Foundation Shoulder and Elbow Unit
- ◆ Degree in Medicine from the University of Oviedo
- ◆ Doctorate Cum Laude in the role of Strontium Ranelate in Experimental Pseudarthrosis from the University of Cantabria



**Dr. Núñez Medina, Alberto**

- ♦ Medical Specialist in Traumatology
- ♦ Medical Traumatologist at the University Hospital of Torrejón
- ♦ Specialist in the Elgeadi Traumatology Team
- ♦ Author of several specialized publications

**Dr. Méndez Arias, Agustín**

- ♦ Occupational Physician at the Madrid Health Service
- ♦ Attending Physician at Cualtis
- ♦ Occupational Physician at MÁS PREVENCIÓN
- ♦ Degree in General Medicine and Surgery at the Autonomous University of Santo Domingo
- ♦ Master's Degree in Occupational Risk Prevention, Occupational Health and Occupational Risk Prevention at the Miguel Hernández University of Elche
- ♦ Master's Degree in Health Management at the University UDIMA

**Dr. Jiménez García, Daniel**

- ♦ Director of TraumaSalud
- ♦ Head of the Fracture Unit of the University Hospital Rey Juan Carlos
- ♦ Orthopedic Surgeon at the Hospital Universitario Rey Juan Carlos
- ♦ Traumatologist and Orthopedic Surgeon at the Hospital Infanta Elena
- ♦ Trauma Physician at the Hospital Madrid Norte Sanchinarro

**Ms. Miguel Rodríguez, Johanna**

- ♦ Coordinator of Operating Room and Instrumentalist. La Luz Hospital
- ♦ Nursing Service Supervisor. Elgeadi Traumatology Clinic
- ♦ Master's Degree in Specialized Nursing Care in Emergency, Critical Patient and Postanesthesia Areas
- ♦ Technician in Anatomical Pathology and Cytology
- ♦ Course in Nursing Care in the Initial Care of the Polytraumatized Patient
- ♦ Course in Nursing Interventions in Disaster Situations
- ♦ DUE on the Ward, Emergency Room, ICU and Head of the Department of Hematology and Transfusions. Vigo
- ♦ DUE of Operating Room

**Dr. Villanueva, Ghino Patricio**

- ♦ Attending Physician of Occupational Health. General University Hospital of Villalba
- ♦ Attending Physician of Occupational Health. Rey Juan Carlos University Hospital
- ♦ Attending Physician of Occupational Health. Hospital Infanta Elena
- ♦ Member of the Elgeadi Traumatology team
- ♦ Medical Surgeon, Universidad Peruana Cayetano Heredia
- ♦ Master's Degree in Occupational Risk Prevention at the University Miguel Hernández de Elche
- ♦ Postgraduate Diploma in Musculoskeletal Ultrasonography



# 06

## Educational Plan

This Hybrid Professional Master's Degree in Traumatologic Emergencies is composed of 8 modules and has been designed by internationally renowned experts. Therefore, throughout the teaching period, the professional will be able to learn about the most recent developments in issues such as segmental and peripheral neurological examination in Trauma Emergencies, the assessment test of the three regions (cervical, dorsal, lumbo-sacral) or the dislocation of hip prosthesis, among many others.



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*This Hybrid Professional Master's Degree in Trauma Emergencies contains the most complete and up-to-date scientific program on the market”*

### Module 1. Holistic Approach to Patients in Trauma Emergencies

- 1.1. Differences Between Polytraumatized, Polyconcussion and Polyfractured
- 1.2. First Assessment
  - 1.2.1. Airway Management
  - 1.2.2. Breathing
  - 1.2.3. Circulation
  - 1.2.4. Neurological Deficit
  - 1.2.5. Exhibition
- 1.3. Second Assessment
  - 1.3.1. Complete Physical Examination
  - 1.3.2. Position for Exploration and Controlled Mobilization
- 1.4. Initial Imaging Tests
  - 1.4.1. X-Rays: Thorax, Pelvis, Spine
  - 1.4.2. Computerized Tomography: Spine, Thorax, Abdomen, Pelvis
- 1.5. Intubation
  - 1.5.1. Airway Management
  - 1.5.2. Cervical Manipulation
  - 1.5.3. Cricothyroidotomy
- 1.6. Ultrasound Scanning Protocol FAST *Exam*
- 1.7. Damage Control in Trauma Emergencies
- 1.8. Real Trauma Emergencies
  - 1.8.1. Compartment Syndrome
  - 1.8.2. Open Fracture
  - 1.8.3. Septic Arthritis
  - 1.8.4. Traumatic Arthrotomy
  - 1.8.5. Necrotizing Fasciitis
  - 1.8.6. Open Book Fracture with Hemodynamic Repercussion
- 1.9. What to Write, How to Write It and When to Write It
- 1.10. Most Frequent Errors when Preparing the Discharge Report
- 1.11. Desired Recommendations and Instructions

### Module 2. Orthopedic Examination in the Emergency Department

- 2.1. Systematics
  - 2.1.1. Inspection
  - 2.1.2. Palpitation
  - 2.1.3. Mobilization
  - 2.1.4. MRC Scale
  - 2.1.5. Simple X-Rays
  - 2.1.6. Complementary Tests
- 2.2. Segmental and Peripheral Neurological Examination in Trauma Emergencies
- 2.3. Spinal Column Examination
  - 2.3.1. Inspection
    - 2.3.1.1. Injuries
    - 2.3.1.2. Skin Alterations
    - 2.3.1.3. Muscular Atrophy
    - 2.3.1.4. Bone Deformities
  - 2.3.2. Gait Alteration
    - 2.3.2.1. Unstable Gait with Wide Base (Myelopathy)
    - 2.3.2.2. Foot Drop (Weakness of Tibialis Anterior or Extensor Longus of the First Toe, L4-L5 Root Compression)
    - 2.3.2.3. Gastrocnemius-Soleus Weakness, S1-S2 Root Compression
    - 2.3.2.4. Abductor Banding (Weakness of the Gluteus Medius due to Radicular Compression of L5)
  - 2.3.3. Palpitation
    - 2.3.3.1. Anatomic References
    - 2.3.3.2. Bone Palpation
    - 2.3.3.3. Soft Tissues, Paravertebral Muscles
  - 2.3.4. Mobility Range
    - 2.3.4.1. Cervical
    - 2.3.4.2. Thoracic
    - 2.3.4.3. Lumbar
  - 2.3.5. Neurovascular
    - 2.3.5.1. Strength
    - 2.3.5.2. Sensory
    - 2.3.5.3. Reflex



- 2.3.6. Additional Tests
  - 2.3.6.1. Anal Tone
  - 2.3.6.2. Bulbocavernous Reflex
  - 2.3.6.3. Assessment Test of the Three Regions (Cervical, Dorsal, Lumbo-Sacral)
- 2.4. Shoulder Examination
  - 2.4.1. Inspection
  - 2.4.2. Palpitation
  - 2.4.3. Movement Arcs
  - 2.4.4. Neurovascular
  - 2.4.5. Specific Tests
- 2.5. Elbow Exploration
  - 2.5.1. Inspection
  - 2.5.2. Palpitation
  - 2.5.3. Movement Arcs
  - 2.5.4. Neurovascular
  - 2.5.5. Specific Tests
- 2.6. Wrist Examination
  - 2.6.1. Inspection
  - 2.6.2. Palpitation
  - 2.6.3. Movement Arcs
  - 2.6.4. Neurovascular
  - 2.6.5. Specific Tests
- 2.7. Hand Examination
  - 2.7.1. Inspection
  - 2.7.2. Palpitation
  - 2.7.3. Movement Arcs
  - 2.7.4. Neurovascular
  - 2.7.5. Specific Tests
- 2.8. Hip Examination
  - 2.8.1. Inspection
  - 2.8.2. Palpitation
  - 2.8.3. Movement Arcs
  - 2.8.4. Neurovascular
  - 2.8.5. Specific Tests

- 2.9. Knee Examination
  - 2.9.1. Inspection
  - 2.9.2. Palpitation
  - 2.9.3. Movement Arcs
  - 2.9.4. Neurovascular
  - 2.9.5. Specific Tests
- 2.10. Ankle and Foot Examination
  - 2.10.1. Inspection
  - 2.10.2. Palpitation
  - 2.10.3. Movement Arcs
  - 2.10.4. Neurovascular
  - 2.10.5. Specific Tests

### Module 3. Trauma Emergencies of the Pelvis and Lower Limbs

- 3.1. Acetabular Fractures
  - 3.1.1. Injury Biomechanics
  - 3.1.2. Diagnostic Imaging
  - 3.1.3. Classification
- 3.2. Labral Injuries
  - 3.2.1. Injury Biomechanics
  - 3.2.2. Diagnostic Imaging
  - 3.2.3. Classification
  - 3.2.4. Therapeutic Strategy
    - 3.2.4.1. Orthopedic Management
    - 3.2.4.2. Surgical Management
- 3.3. Fracture of the Distal Femur
  - 3.3.1. Injury Biomechanics
  - 3.3.2. Diagnostic Imaging
  - 3.3.3. Classification
  - 3.3.4. Therapeutic Strategy
    - 3.3.4.1. Orthopedic Management
    - 3.3.4.2. Surgical Management

- 3.4. Femoral Diaphysis Fracture
  - 3.4.1. Injury Biomechanics
  - 3.4.2. Diagnostic Imaging
  - 3.4.3. Classification
  - 3.4.4. Therapeutic Strategy
    - 3.4.4.1. Orthopedic Management
    - 3.4.4.2. Surgical Management
- 3.5. Hip Dislocation
  - 3.5.1. Injury Biomechanics
  - 3.5.2. Diagnostic Imaging
  - 3.5.3. Classification
  - 3.5.4. Therapeutic Strategy
    - 3.5.4.1. Orthopedic Management
    - 3.5.4.2. Surgical Management
- 3.6. Hip Prosthesis Dislocation
  - 3.6.1. Injury Biomechanics
  - 3.6.2. Diagnostic Imaging
  - 3.6.3. Classification
  - 3.6.4. Therapeutic Strategy
    - 3.6.4.1. Orthopedic Management
    - 3.6.4.2. Surgical Management
- 3.7. Impending Fractures
  - 3.7.1. Injury Biomechanics
  - 3.7.2. Diagnostic Imaging
  - 3.7.3. Classification
  - 3.7.4. Therapeutic Strategy
- 3.8. Intertrochanteric and Subtrochanteric Fractures
  - 3.8.1. Injury Biomechanics
  - 3.8.2. Diagnostic Imaging
  - 3.8.3. Classification
  - 3.8.4. Therapeutic Strategy
    - 3.8.4.1. Orthopedic Management
    - 3.8.4.2. Surgical Management
- 3.9. Femoral Neck Fracture
  - 3.9.1. Injury Biomechanics
  - 3.9.2. Diagnostic Imaging
  - 3.9.3. Classification
  - 3.9.4. Therapeutic Strategy
    - 3.9.4.1. Orthopedic Management
    - 3.9.4.2. Surgical Management
- 3.10. Knee Dislocation
  - 3.10.1. Injury Biomechanics
  - 3.10.2. Diagnostic Imaging
  - 3.10.3. Classification
  - 3.10.4. Therapeutic Strategy
    - 3.10.4.1. Orthopedic Management
    - 3.10.4.2. Surgical Management
- 3.11. Meniscal Injuries
  - 3.11.1. Injury Biomechanics
  - 3.11.2. Diagnostic Imaging
  - 3.11.3. Classification
  - 3.11.4. Therapeutic Strategy
    - 3.11.4.1. Orthopedic Management
    - 3.11.4.2. Surgical Management
- 3.12. Quadriceps or Patellar Tendon Rupture
  - 3.12.1. Injury Biomechanics
  - 3.12.2. Diagnostic Imaging
  - 3.12.3. Classification
  - 3.12.4. Therapeutic Strategy
    - 3.12.4.1. Orthopedic Management
    - 3.12.4.2. Surgical Management
- 3.13. Patella Fractures
  - 3.13.1. Injury Biomechanics
  - 3.13.2. Diagnostic Imaging
  - 3.13.3. Classification

- 3.13.4. Therapeutic Strategy
  - 3.13.4.1. Orthopedic Management
  - 3.13.4.2. Surgical Management
- 3.14. Patella Dislocation
  - 3.14.1. Injury Biomechanics
  - 3.14.2. Diagnostic Imaging
  - 3.14.3. Classification
  - 3.14.4. Therapeutic Strategy
    - 3.14.4.1. Orthopedic Management
    - 3.14.4.2. Surgical Management
- 3.15. Periprosthetic Hip Fractures
  - 3.15.1. Injury Biomechanics
  - 3.15.2. Diagnostic Imaging
  - 3.15.3. Classification
  - 3.15.4. Therapeutic Strategy
    - 3.15.4.1. Orthopedic Management
    - 3.15.4.2. Surgical Management
- 3.16. Periprosthetic Knee Fractures
  - 3.16.1. Injury Biomechanics
  - 3.16.2. Diagnostic Imaging
  - 3.16.3. Classification
  - 3.16.4. Therapeutic Strategy
    - 3.16.4.1. Orthopedic Management
    - 3.16.4.2. Surgical Management
- 3.17. Tibia and Fibula Diaphyseal Fractures
  - 3.17.1. Injury Biomechanics
  - 3.17.2. Diagnostic Imaging
  - 3.17.3. Classification
  - 3.17.4. Therapeutic Strategy
    - 3.17.4.1. Orthopedic Management
    - 3.17.4.2. Surgical Management

- 3.18. Pelvic Ring Injury
  - 3.18.1. Injury Biomechanics
  - 3.18.2. Diagnostic Imaging
  - 3.18.3. Classification
  - 3.18.4. Therapeutic Strategy
    - 3.18.4.1. Orthopedic Management
    - 3.18.4.2. Surgical Management

## Module 4. Upper Limb Trauma Emergencies

- 4.1. Shoulder and Arm
  - 4.1.1. Glenohumeral Dislocation
    - 4.1.1.1. Injury Biomechanics
    - 4.1.1.2. Physical Examination
    - 4.1.1.3. Diagnostic Imaging
    - 4.1.1.4. Classification
    - 4.1.1.5. Closed Treatment
    - 4.1.1.6. Post-Reduction Management
  - 4.1.2. Fracture of the Proximal Humerus
    - 4.1.2.1. Injury Biomechanics
    - 4.1.2.2. Physical Examination
    - 4.1.2.3. Diagnostic Imaging
    - 4.1.2.4. Classification
    - 4.1.2.5. Therapeutic Strategy
    - 4.1.2.6. Surgical Treatment
      - 4.1.2.6.1. Non-Urgent with a Follow-Up in 1 Week
    - 4.1.2.7. Orthopedic Management
  - 4.1.3. Clavicle Fracture
    - 4.1.3.1. Injury Biomechanics
    - 4.1.3.2. Physical Examination
    - 4.1.3.3. Diagnostic Imaging
    - 4.1.3.4. Classification
    - 4.1.3.5. Therapeutic Strategy
      - 4.1.3.5.1. Orthopedic Management
      - 4.1.3.5.2. Surgical Treatment



- 4.1.4. Acromio-Clavicular Injury
  - 4.1.4.1. Injury Biomechanics
  - 4.1.4.2. Physical Examination
  - 4.1.4.3. Diagnostic Imaging
  - 4.1.4.4. Rockwood Classification
  - 4.1.4.5. Therapeutic Strategy
    - 4.1.4.5.1. Orthopedic Management
    - 4.1.4.5.2. Surgical Treatment
- 4.1.5. Sternoclavicular injury
  - 4.1.5.1. Injury Biomechanics
  - 4.1.5.2. Physical Examination
  - 4.1.5.3. Diagnostic Imaging
  - 4.1.5.4. Classification
  - 4.1.5.5. Treatment
- 4.1.6. Septic Arthritis of the Shoulder
  - 4.1.6.1. Risk Factors
  - 4.1.6.2. Physical Examination
  - 4.1.6.3. Diagnostic Imaging
  - 4.1.6.4. Arthrocentesis and Sampling
  - 4.1.6.5. Therapeutic Plan
- 4.1.7. Scapula Fracture
  - 4.1.7.1. Injury Biomechanics
  - 4.1.7.2. Physical Examination
  - 4.1.7.3. Diagnostic Imaging
  - 4.1.7.4. Therapeutic Strategy
    - 4.1.7.4.1. Orthopedic Management
    - 4.1.7.4.2. Surgical Treatment
- 4.1.8. Fracture of the Body of the Humerus
  - 4.1.8.1. Injury Biomechanics
  - 4.1.8.2. Physical Examination
  - 4.1.8.3. Diagnostic Imaging
  - 4.1.8.4. Classification
  - 4.1.8.5. Therapeutic Strategy
    - 4.1.8.5.1. Orthopedic Management
    - 4.1.8.5.2. Surgical Treatment





- 4.1.9. Fracture of the Distal Humerus
  - 4.1.9.1. Injury Biomechanics
  - 4.1.9.2. Physical Examination
  - 4.1.9.3. Diagnostic Imaging
  - 4.1.9.4. Classification
    - 4.1.9.4.1. Descriptive
    - 4.1.9.4.2. Milch Classification
    - 4.1.9.4.3. Jupiter Classification
  - 4.1.9.5. Therapeutic Strategy
    - 4.1.9.5.1. Surgical Treatment
    - 4.1.9.5.2. Orthopedic Management
- 4.1.10. Olecranon Fracture
  - 4.1.10.1. Injury Biomechanics
  - 4.1.10.2. Physical Examination
  - 4.1.10.3. Diagnostic Imaging
  - 4.1.10.4. Classification
  - 4.1.10.5. Therapeutic Strategy
    - 4.1.10.5.1. Orthopedic Management
    - 4.1.10.5.2. Surgical Treatment
- 4.1.11. Radial Head Fracture
  - 4.1.11.1. Injury Biomechanics
  - 4.1.11.2. Physical Examination
  - 4.1.11.3. Diagnostic Imaging
  - 4.1.11.4. Mason Classification
    - 4.1.11.4.1. Infiltration / Aspiration
  - 4.1.11.5. Therapeutic Strategy
    - 4.1.11.5.1. Orthopedic Management
    - 4.1.11.5.2. Surgical Treatment
- 4.1.12. Elbow Dislocation
  - 4.1.12.1. Injury Biomechanics
  - 4.1.12.2. Physical Examination
  - 4.1.12.3. Diagnostic Imaging
  - 4.1.12.4. Classification
  - 4.1.12.5. Initial Management
  - 4.1.12.6. Orthopedic Management
  - 4.1.12.7. Surgical Management

- 4.1.13. Coronoid Tubercle Fracture
  - 4.1.13.1. Osteology of the Coronoids
  - 4.1.13.2. Combined Injuries
  - 4.1.13.3. Injury Biomechanics
  - 4.1.13.4. Physical Examination
  - 4.1.13.5. Diagnostic Imaging
  - 4.1.13.6. Classification
  - 4.1.13.7. Therapeutic Strategy
    - 4.1.13.7.1. Orthopedic Management
    - 4.1.13.7.2. Surgical Management
- 4.1.14. Capitellum Fracture
  - 4.1.14.1. Injury Biomechanics
  - 4.1.14.2. Physical Examination
  - 4.1.14.3. Diagnostic Imaging
  - 4.1.14.4. Classification
  - 4.1.14.5. Therapeutic Strategy
    - 4.1.14.5.1. Orthopedic Management
    - 4.1.14.5.2. Surgical Management
- 4.1.15. Forearm Fracture (Radius and Ulna Diaphysis)
  - 4.1.15.1. Injury Biomechanics
  - 4.1.15.2. Physical Examination
  - 4.1.15.3. Diagnostic Imaging
  - 4.1.15.4. Therapeutic Strategy
    - 4.1.15.4.1. Orthopedic Management
    - 4.1.15.4.2. Surgical Management
- 4.2. Wrist and Hand (Except Fingers)
  - 4.2.1. Fracture of the Distal Radius
    - 4.2.1.1. Injury Biomechanics
    - 4.2.1.2. Physical Examination
    - 4.2.1.3. Diagnostic Imaging
    - 4.2.1.4. Classification Systems
    - 4.2.1.5. Therapeutic Strategy
  - 4.2.2. Distal Radial-Ulnar Joint Injury
    - 4.2.2.1. Injury Biomechanics
    - 4.2.2.2. Physical Examination
    - 4.2.2.3. Diagnostic Imaging
    - 4.2.2.4. Therapeutic Strategy
      - 4.2.2.4.1. Orthopedic Management
      - 4.2.2.4.2. Surgical Management
  - 4.2.3. Fracture of the Carpus (Without Scaphoid)
    - 4.2.3.1. Injury Biomechanics
    - 4.2.3.2. Physical Examination
    - 4.2.3.3. Diagnostic Imaging
    - 4.2.3.4. Pyramidal Fracture
      - 4.2.3.4.1. Cortical Fracture (Avulsion)
      - 4.2.3.4.2. Fracture of the Body
      - 4.2.3.4.3. Avulsion Volar Fracture
    - 4.2.3.5. Therapeutic Strategy
      - 4.2.3.5.1. Orthopedic Management
      - 4.2.3.5.2. Surgical Management
  - 4.2.4. Trapezium Fracture
    - 4.2.4.1. Classification
    - 4.2.4.2. Therapeutic Strategy
      - 4.2.4.2.1. Orthopedic Management
      - 4.2.4.2.2. Surgical Management
  - 4.2.5. Large Bone Fracture
    - 4.2.5.1. Classification
    - 4.2.5.2. Therapeutic Strategy
      - 4.2.5.2.1. Orthopedic Management
      - 4.2.5.2.2. Surgical Management



- 4.2.6. Scaphoid Fracture
  - 4.2.6.1. Injury Biomechanics
  - 4.2.6.2. Diagnostic Imaging
    - 4.2.6.2.1. X-Ray
    - 4.2.6.2.2. CAT
    - 4.2.6.2.3. Limitations
  - 4.2.6.3. Classification Systems
  - 4.2.6.4. Therapeutic Strategy
    - 4.2.6.4.1. Orthopedic Management
    - 4.2.6.4.2. Surgical Management
- 4.2.7. Hook of Hamate Fracture
  - 4.2.7.1. Classification
  - 4.2.7.2. Therapeutic Strategy
    - 4.2.7.2.1. Orthopedic Management
    - 4.2.7.2.2. Surgical Management
- 4.2.8. Pisiform Fracture
  - 4.2.8.1. Classification
  - 4.2.8.2. Therapeutic Strategy
    - 4.2.8.2.1. Orthopedic Management
    - 4.2.8.2.2. Surgical Management
- 4.2.9. Fracture of the Semilunar Bone
  - 4.2.9.1. Classification
  - 4.2.9.2. Therapeutic Strategy
    - 4.2.9.2.1. Orthopedic Management
    - 4.2.9.2.2. Surgical Management
- 4.2.10. Trapezoid Fracture
  - 4.2.10.1. Classification
  - 4.2.10.2. Therapeutic Strategy
    - 4.2.10.2.1. Orthopedic Management
    - 4.2.10.2.2. Surgical Management
- 4.2.11. Scapholunate Instability
  - 4.2.11.1. Injury Biomechanics
  - 4.2.11.2. Diagnostic Imaging
  - 4.2.11.3. Watson States in SLAC
  - 4.2.11.4. Therapeutic Strategy
    - 4.2.11.4.1. Orthopedic Management
    - 4.2.11.4.2. Surgical Management
- 4.2.12. Dislocation of the Semilunar Bone
  - 4.2.12.1. Injury Biomechanics
  - 4.2.12.2. Diagnostic Imaging
  - 4.2.12.3. Classification
  - 4.2.12.4. Therapeutic Strategy
    - 4.2.12.4.1. Orthopedic Management
    - 4.2.12.4.2. Surgical Management
- 4.2.13. Tendon Injuries
- 4.2.14. Finger Fractures and Dislocations
- 4.2.15. Finger Amputation
- 4.2.16. Foreign Bodies in Wrist and Hand
- 4.2.17. Hand Infections

## Module 5. Ankle and Foot Emergencies

- 5.1. Achilles Tendon Rupture
  - 5.1.1. Injury Biomechanics
  - 5.1.2. Diagnostic Imaging
  - 5.1.3. Classification
  - 5.1.4. Therapeutic Strategy
    - 5.1.4.1. Orthopedic Management
    - 5.1.4.2. Surgical Management

- 5.2. Ankle Fracture
  - 5.2.1. Injury Biomechanics
  - 5.2.2. Diagnostic Imaging
  - 5.2.3. Classification
  - 5.2.4. Therapeutic Strategy
    - 5.2.4.1. Orthopedic Management
    - 5.2.4.2. Surgical Management
- 5.3. Calcaneal Fracture
  - 5.3.1. Injury Biomechanics
  - 5.3.2. Diagnostic Imaging
  - 5.3.3. Classification
  - 5.3.4. Therapeutic Strategy
    - 5.3.4.1. Orthopedic Management
    - 5.3.4.2. Surgical Management
- 5.4. Proximal 5th Metatarsal Fracture
  - 5.4.1. Injury Biomechanics
  - 5.4.2. Diagnostic Imaging
  - 5.4.3. Classification
  - 5.4.4. Therapeutic Strategy
    - 5.4.4.1. Orthopedic Management
    - 5.4.4.2. Surgical Management
- 5.5. Lisfranc Injury
  - 5.5.1. Injury Biomechanics
  - 5.5.2. Diagnostic Imaging
  - 5.5.3. Classification
  - 5.5.4. Therapeutic Strategy
    - 5.5.4.1. Orthopedic Management
    - 5.5.4.2. Surgical Management
- 5.6. Metatarsal Fractures
  - 5.6.1. Injury Biomechanics
  - 5.6.2. Diagnostic Imaging
  - 5.6.3. Classification
  - 5.6.4. Therapeutic Strategy
    - 5.6.4.1. Orthopedic Management
    - 5.6.4.2. Surgical Management
- 5.7. Navicular Fracture
  - 5.7.1. Injury Biomechanics
  - 5.7.2. Diagnostic Imaging
  - 5.7.3. Classification
  - 5.7.4. Therapeutic Strategy
    - 5.7.4.1. Orthopedic Management
    - 5.7.4.2. Surgical Management
- 5.8. Tibial Pylon Fracture
  - 5.8.1. Injury Biomechanics
  - 5.8.2. Diagnostic Imaging
  - 5.8.3. Classification
  - 5.8.4. Therapeutic Strategy
    - 5.8.4.1. Orthopedic Management
    - 5.8.4.2. Surgical Management
- 5.9. Fracture of the Neck of the Talus
  - 5.9.1. Injury Biomechanics
  - 5.9.2. Diagnostic Imaging
  - 5.9.3. Classification
  - 5.9.4. Therapeutic Strategy
    - 5.9.4.1. Orthopedic Management
    - 5.9.4.2. Surgical Management
- 5.10. Fracture of the Lateral Process of the Talus

- 5.10.1. Injury Biomechanics
- 5.10.2. Diagnostic Imaging
- 5.10.3. Classification
- 5.10.4. Therapeutic Strategy
  - 5.10.4.1. Orthopedic Management
  - 5.10.4.2. Surgical Management
- 5.11. Fracture of the Phalanges of the Foot
  - 5.11.1. Injury Biomechanics
  - 5.11.2. Diagnostic Imaging
  - 5.11.3. Classification
  - 5.11.4. Therapeutic Strategy
    - 5.11.4.1. Orthopedic Management
    - 5.11.4.2. Surgical Management

## Module 6. Trauma Emergencies in Children

- 6.1. Pediatric Patient Sedation
  - 6.1.1. Anxiolysis, Analgesia, Sedation
  - 6.1.2. Non-Pharmacological Agents
  - 6.1.3. Local Blocks
  - 6.1.4. Sedation
- 6.2. Immobilization in the Pediatric Patient
  - 6.2.1. Challenges in the Placement of Immobilization Systems
    - 6.2.1.1. Capacity for Understanding and Tolerance
    - 6.2.1.2. Difficulties in Expressing Pain in the Child
    - 6.2.1.3. Ages and Sizes
  - 6.2.2. Recommendations During Immobilization
    - 6.2.2.1. Types of Immobilization Systems
- 6.3. Principles of Immobilization
- 6.4. Signs of Child Abuse Non-Accidental Traumatic Injury (TNA)
  - 6.4.1. Injury Biomechanics
    - 6.4.1.1. Diagnostic Imaging
    - 6.4.1.2. Classification
  - 6.4.2. Typical or Common TNA Injuries
  - 6.4.3. Orthopedic Management
  - 6.4.4. Surgical Management
- 6.5. Salter-Harris Classification
  - 6.5.1. Injury Biomechanics
  - 6.5.2. Diagnostic Imaging
  - 6.5.3. Classification
  - 6.5.4. Therapeutic Strategy
    - 6.5.4.1. Orthopedic Management
    - 6.5.4.2. Surgical Management
- 6.6. Clavicle Fracture
  - 6.6.1. Injury Biomechanics
  - 6.6.2. Diagnostic Imaging
  - 6.6.3. Classification
  - 6.6.4. Therapeutic Strategy
    - 6.6.4.1. Orthopedic Management
    - 6.6.4.2. Surgical Management
- 6.7. Proximal Humerus Fracture
  - 6.7.1. Injury Biomechanics
  - 6.7.2. Diagnostic Imaging
  - 6.7.3. Classification
  - 6.7.4. Therapeutic Strategy
    - 6.7.4.1. Orthopedic Management
    - 6.7.4.2. Surgical Management

- 6.8. Humeral Diaphysis Fracture
  - 6.8.1. Injury Biomechanics
  - 6.8.2. Diagnostic Imaging
  - 6.8.3. Classification
  - 6.8.4. Therapeutic Strategy
    - 6.8.4.1. Orthopedic Management
    - 6.8.4.2. Surgical Management
- 6.9. Supracondylar Fracture of the Humerus
  - 6.9.1. Injury Biomechanics
  - 6.9.2. Diagnostic Imaging
  - 6.9.3. Classification
  - 6.9.4. Therapeutic Strategy
    - 6.9.4.1. Orthopedic Management
    - 6.9.4.2. Surgical Management
- 6.10. Humeral Condyle Fracture
  - 6.10.1. Injury Biomechanics
  - 6.10.2. Diagnostic Imaging
  - 6.10.3. Classification
  - 6.10.4. Therapeutic Strategy
    - 6.10.4.1. Orthopedic Management
    - 6.10.4.2. Surgical Management
- 6.11. Epicondyle Fracture
  - 6.11.1. Injury Biomechanics
  - 6.11.2. Diagnostic Imaging
  - 6.11.3. Classification
  - 6.11.4. Therapeutic Strategy
    - 6.11.4.1. Orthopedic Management
    - 6.11.4.2. Surgical Management
- 6.12. Distal Humeral Epiphysiolysis
  - 6.12.1. Injury Biomechanics
  - 6.12.2. Diagnostic Imaging
  - 6.12.3. Classification
  - 6.12.4. Therapeutic Strategy
    - 6.12.4.1. Orthopedic Management
    - 6.12.4.2. Surgical Management
- 6.13. Radial Head Subluxation (Painful Pronation)
  - 6.13.1. Injury Biomechanics
  - 6.13.2. Diagnostic Imaging
  - 6.13.3. Classification
  - 6.13.4. Therapeutic Strategy
    - 6.13.4.1. Orthopedic Management
    - 6.13.4.2. Surgical Management
- 6.14. Fracture of the Neck of the Radius
  - 6.14.1. Injury Biomechanics
  - 6.14.2. Diagnostic Imaging
  - 6.14.3. Classification
  - 6.14.4. Therapeutic Strategy
    - 6.14.4.1. Orthopedic Management
    - 6.14.4.2. Surgical Management
- 6.15. Ulna and Radius Fracture (Forearm)
  - 6.15.1. Injury Biomechanics
  - 6.15.2. Diagnostic Imaging
  - 6.15.3. Classification
  - 6.15.4. Therapeutic Strategy
    - 6.15.4.1. Orthopedic Management
    - 6.15.4.2. Surgical Management



- 6.16. Fracture of the Distal Radius
  - 6.16.1. Injury Biomechanics
  - 6.16.2. Diagnostic Imaging
  - 6.16.3. Classification
  - 6.16.4. Therapeutic Strategy
    - 6.16.4.1. Orthopedic Management
    - 6.16.4.2. Surgical Management
- 6.17. Monteggia Fracture
  - 6.17.1. Injury Biomechanics
  - 6.17.2. Diagnostic Imaging
  - 6.17.3. Classification
  - 6.17.4. Therapeutic Strategy
    - 6.17.4.1. Orthopedic Management
    - 6.17.4.2. Surgical Management
- 6.18. Galeazzi Fracture
  - 6.18.1. Injury Biomechanics
  - 6.18.2. Diagnostic Imaging
  - 6.18.3. Classification
  - 6.18.4. Therapeutic Strategy
    - 6.18.4.1. Orthopedic Management
    - 6.18.4.2. Surgical Management
- 6.19. Pelvic Fractures
  - 6.19.1. Injury Biomechanics
  - 6.19.2. Diagnostic Imaging
  - 6.19.3. Classification
  - 6.19.4. Therapeutic Strategy
    - 6.19.4.1. Orthopedic Management
    - 6.19.4.2. Surgical Management
- 6.20. Avulsion Pelvis Fractures
  - 6.20.1. Injury Biomechanics
  - 6.20.2. Diagnostic Imaging
  - 6.20.3. Classification
  - 6.20.4. Therapeutic Strategy
    - 6.20.4.1. Orthopedic Management
    - 6.20.4.2. Surgical Management
- 6.21. Coxalgia: Sepsis vs. Transient Synovitis
  - 6.21.1. Interrogation
  - 6.21.2. Physical Examination
  - 6.21.3. Diagnostic Imaging
  - 6.21.4. Complementary Tests
  - 6.21.5. Kocher Criteria
  - 6.21.6. Therapeutic Strategy
- 6.22. Hip Dislocation
  - 6.22.1. Injury Biomechanics
  - 6.22.2. Diagnostic Imaging
  - 6.22.3. Classification
  - 6.22.4. Therapeutic Strategy
    - 6.22.4.1. Orthopedic Management
    - 6.22.4.2. Surgical Management
- 6.23. Slipped Femoral Epiphysis
  - 6.23.1. Interrogation
  - 6.23.2. Physical Examination
  - 6.23.3. Diagnostic Imaging
  - 6.23.4. Classifications and Degrees of Severity
  - 6.23.5. Therapeutic Strategy
    - 6.23.5.1. Conservative Management
    - 6.23.5.2. Surgical Indication

- 6.24. Hip Fracture
  - 6.24.1. Interrogation
  - 6.24.2. Physical Examination
  - 6.24.3. Diagnostic Imaging
  - 6.24.4. Classification
  - 6.24.5. Therapeutic Strategy
    - 6.24.5.1. Conservative Management
    - 6.24.5.2. Surgical Indication
- 6.25. Femur Fracture
  - 6.25.1. Injury Biomechanics
  - 6.25.2. Diagnostic Imaging
  - 6.25.3. Classification
  - 6.25.4. Therapeutic Strategy
    - 6.25.4.1. Orthopedic Management
    - 6.25.4.2. Surgical Management
- 6.26. Epiphysiolsis of Distal Femur
  - 6.26.1. Injury Biomechanics
  - 6.26.2. Diagnostic Imaging
  - 6.26.3. Classification
  - 6.26.4. Therapeutic Strategy
    - 6.26.4.1. Orthopedic Management
    - 6.26.4.2. Surgical Management
- 6.27. Fracture of the Anterior Tibial Tuberosity
  - 6.27.1. Injury Biomechanics
  - 6.27.2. Diagnostic Imaging
  - 6.27.3. Classification
  - 6.27.4. Therapeutic Strategy
    - 6.27.4.1. Orthopedic Management
    - 6.27.4.2. Surgical Management
- 6.28. Tibial Tubercle Fracture (Gerdy)





- 6.28.1. Injury Biomechanics
- 6.28.2. Diagnostic Imaging
- 6.28.3. Classification
- 6.28.4. Therapeutic Strategy
  - 6.28.4.1. Orthopedic Management
  - 6.28.4.2. Surgical Management
- 6.29. Toddler Fracture
  - 6.29.1. Injury Biomechanics
  - 6.29.2. Diagnostic Imaging
  - 6.29.3. Classification
  - 6.29.4. Therapeutic Strategy
    - 6.29.4.1. Orthopedic Management
    - 6.29.4.2. Surgical Management
- 6.30. Ankle Fractures
  - 6.30.1. Injury Biomechanics
  - 6.30.2. Diagnostic Imaging
  - 6.30.3. Classification
  - 6.30.4. Therapeutic Strategy
    - 6.30.4.1. Orthopedic Management
    - 6.30.4.2. Surgical Management

## Module 7. Spinal Trauma Emergencies

- 7.1. Incomplete Spinal Cord Injury
  - 7.1.1. Injury Biomechanics
  - 7.1.2. Physical Examination
  - 7.1.3. Diagnostic Imaging
  - 7.1.4. Classification
    - 7.1.4.1. Clinical Symptoms
    - 7.1.4.2. ASIA Scale
  - 7.1.5. Therapeutic Strategy
    - 7.1.5.1. Initial Management
    - 7.1.5.2. Surgical Management

- 7.2. Cauda Equina Syndrome
  - 7.2.1. Interrogation
  - 7.2.2. Physical Examination
  - 7.2.3. Diagnostic Imaging
  - 7.2.4. Treatment
- 7.3. Fracture in Patients with Ankylosing Spondylitis
  - 7.3.1. Injury Biomechanics
  - 7.3.2. Diagnostic Imaging
  - 7.3.3. Classification
  - 7.3.4. Therapeutic Strategy
    - 7.3.4.1. Orthopedic Management
    - 7.3.4.2. Surgical Management
- 7.4. Atlo-Axial Fractures
  - 7.4.1. Injury Biomechanics
  - 7.4.2. Diagnostic Imaging
  - 7.4.3. Classification
  - 7.4.4. Therapeutic Strategy
    - 7.4.4.1. Conservative Management
    - 7.4.4.2. Surgical Management
- 7.5. Odontoid Process Fracture
  - 7.5.1. Injury Biomechanics
  - 7.5.2. Physical Examination
  - 7.5.3. Diagnostic Imaging
  - 7.5.4. Classification
  - 7.5.5. Therapeutic Strategy
    - 7.5.5.1. Conservative Management
    - 7.5.5.2. Surgical Management
- 7.6. Subaxial Fractures Between C3-C7
  - 7.6.1. Injury Biomechanics
  - 7.6.2. Physical Examination
  - 7.6.3. Diagnostic Imaging
  - 7.6.4. Classification
  - 7.6.5. Therapeutic Strategy
    - 7.6.5.1. Conservative Management
    - 7.6.5.2. Surgical Management
- 7.7. Central Medullary Cord Syndrome
  - 7.7.1. Injury Biomechanics
  - 7.7.2. Physical Examination
  - 7.7.3. Diagnostic Imaging
  - 7.7.4. Classification
  - 7.7.5. Therapeutic Strategy
    - 7.7.5.1. Conservative Management
    - 7.7.5.2. Surgical Management
- 7.8. Thoracolumbar Fractures
  - 7.8.1. Injury Biomechanics
  - 7.8.2. Physical Examination
  - 7.8.3. Diagnostic Imaging
  - 7.8.4. Classification
  - 7.8.5. Therapeutic Strategy
    - 7.8.5.1. Conservative Management
    - 7.8.5.2. Surgical Management
- 7.9. Fractures of Spinous Processes and Lateral Laminae
  - 7.9.1. Injury Biomechanics
  - 7.9.2. Physical Examination
  - 7.9.3. Diagnostic Imaging
  - 7.9.4. Classification
  - 7.9.5. Therapeutic Strategy
    - 7.9.5.1. Conservative Management
    - 7.9.5.2. Surgical Management



- 7.10. Burst Fractures
  - 7.10.1. Interrogation
  - 7.10.2. Physical Examination
  - 7.10.3. Diagnostic Imaging
  - 7.10.4. Classification
  - 7.10.5. Therapeutic Strategy
    - 7.10.5.1. Conservative Management
    - 7.10.5.2. Surgical Management
- 7.11. Chance Fractures
  - 7.11.1. Injury Biomechanics
  - 7.11.2. Physical Examination
  - 7.11.3. Diagnostic Imaging
  - 7.11.4. Classification
  - 7.11.5. Therapeutic Strategy
    - 7.11.5.1. Conservative Management
    - 7.11.5.2. Surgical Management
- 7.12. Thoracolumbar Fractures/ Dislocations
  - 7.12.1. Injury Biomechanics
  - 7.12.2. Physical Examination
  - 7.12.3. Diagnostic Imaging
  - 7.12.4. Classification
  - 7.12.5. Therapeutic Strategy
    - 7.12.5.1. Conservative Management
    - 7.12.5.2. Surgical Management
- 7.13. Sacral Fractures
  - 7.13.1. Injury Biomechanics
  - 7.13.2. Physical Examination
  - 7.13.3. Diagnostic Imaging
  - 7.13.4. Classification
  - 7.13.5. Therapeutic Strategy
    - 7.13.5.1. Conservative Management
    - 7.13.5.2. Surgical Management

- 7.14. Vertebral Osteomyelitis
  - 7.14.1. Injury Biomechanics
  - 7.14.2. Physical Examination
  - 7.14.3. Diagnostic Imaging
  - 7.14.4. Classification
  - 7.14.5. Therapeutic Strategy
    - 7.14.5.1. Conservative Management
    - 7.14.5.2. Surgical Management

### Module 8. Musculoskeletal Ultrasound and Radiological Studies in Trauma Emergencies

- 8.1. General Information on Musculoskeletal Ultrasonography
- 8.2. Indications on Musculoskeletal Ultrasonography
- 8.3. Ultrasound Support for Invasive Techniques
- 8.4. Indications for Simple X-Rays
- 8.5. Interpretation of Bone X-Rays
- 8.6. Radiological Characteristics of Fractures
- 8.7. Higher Resolution Imaging Studies Indicated in the Emergency Department (CT)

### Module 9. Nursing in Trauma Emergencies

- 9.1. Compressive Bandage after Trauma Surgery
- 9.2. Placement and Care of the Redon
- 9.3. Minor and Early Complications after Surgery
- 9.4. Healing, Follow-up and Complications of Surgical Wounds
- 9.5. Staple Removal
- 9.6. Basic Instrumentation in Emergency Orthopedic Surgery
- 9.7. Asepsis and Antisepsis in Trauma Emergencies

07

# Clinical Internship

This Hybrid Professional Master's Degree in Trauma Emergencies includes a 3-week intensive stay at the end of the online learning phase. Therefore, the physician will be able to put into practice the new techniques acquired throughout the online period, always with the accompaniment of specialists attached to the clinical center, and with the opportunity to access real patients with trauma injuries that require urgent attention.





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*This program will allow you to do an Internship in one of the most prestigious centers in the field of traumatology”*



The intensive stay period of this Trauma Emergencies program consists of a Clinical Internship in a center of recognized international prestige. It will be carried out over a period of 3 weeks, from Monday to Friday and with 8 hours of continuous learning, always with a specialist from the center itself. Therefore, this internship will allow the professional to have access to real patients next to a team of renowned professionals in this area of medicine, applying the most innovative diagnostic procedures to address different types of trauma injuries.

The practical teaching will be carried out with the active participation of the student performing the activities and procedures of each area of knowledge (learning to learn and learning to do), with the accompaniment and guidance of teachers and other fellow trainees that facilitate teamwork and multidisciplinary integration as transversal competencies for the practice of Trauma Emergencies (learning to be and learning to relate).

“

*Update yourself in a practical and dynamic way, together with the leading specialists in traumatology”*







The procedures described below will form the basis of the practical part of the training, and their implementation is subject to both the suitability of the patients and the availability of the center and its workload, with the proposed activities being as follows:

Module	Practical Activity
<b>Reception of Patients in Trauma Emergencies</b>	Perform a complete assessment of the polytraumatized, polycontused or polyfractured patient
	Implement the most current first and second assessment protocols
	Carry out initial imaging tests
	Apply the new diagnostic techniques in the initial patient assessment
<b>Trauma Emergencies of the Upper Limb, Lower Limb and Pelvis</b>	Participate in the review of cases of shoulder and arm trauma emergencies such as clavicle fractures, septic arthritis of the shoulder, fracture of the distal humerus, etc
	Assess trauma emergencies in wrist and hand such as trapezius fractures, pisiform fracture, scapholunate instability, etc
	Assess trauma emergencies of the pelvis and lower limb such as fracture of the distal femur, hip dislocation, femoral neck fracture, quadriceps tendon rupture, etc
<b>Ankle, Foot and Spine Emergencies</b>	Assess patients with cauda equina syndrome, central medullary cord syndrome, various fractures, etc
	Apply the current work methodology to deal with Achilles tendon ruptures, ankle fractures, phalangeal fractures of the foot, etc
	Implement therapies based on orthopedic and traumatologic advances, with a complete assessment of the patient
<b>Imaging Tests in Trauma Emergencies</b>	Provide ultrasound support during interventions with invasive techniques
	Interpret bone radiographs of various types
	Make use of higher resolution imaging studies indicated in the emergency department



## Civil Liability Insurance

This institution's main concern is to guarantee the safety of the trainees and other collaborating agents involved in the internship process at the company. Among the measures dedicated to achieve this is the response to any incident that may occur during the entire teaching-learning process.

To this end, this entity commits to purchasing a civil liability insurance policy to cover any eventuality that may arise during the course of the internship at the center.

This liability policy for interns will have broad coverage and will be taken out prior to the start of the practical training period. That way professionals will not have to worry in case of having to face an unexpected situation and will be covered until the end of the internship program at the center.



## General Conditions of the Internship Program

The general terms and conditions of the internship agreement for the program are as follows:

**1. TUTOR:** During the Hybrid Professional Master's Degree, students will be assigned with two tutors who will accompany them throughout the process, answering any doubts and questions that may arise. On the one hand, there will be a professional tutor belonging to the internship center who will have the purpose of guiding and supporting the student at all times. On the other hand, they will also be assigned with an academic tutor whose mission will be to coordinate and help the students during the whole process, solving doubts and facilitating everything they may need. In this way, the student will be accompanied and will be able to discuss any doubts that may arise, both clinical and academic.

**2. DURATION:** The internship program will have a duration of three continuous weeks, in 8-hour days, 5 days a week. The days of attendance and the schedule will be the responsibility of the center and the professional will be informed well in advance so that they can make the appropriate arrangements.

**3. ABSENCE:** If the students does not show up on the start date of the Hybrid Professional Master's Degree, they will lose the right to it, without the possibility of reimbursement or change of dates. Absence for more than two days from the internship, without justification or a medical reason, will result in the professional's withdrawal from the internship, therefore, automatic termination of the internship. Any problems that may arise during the course of the internship must be urgently reported to the academic tutor.

**4. CERTIFICATION:** Professionals who pass the Hybrid Professional Master's Degree will receive a certificate accrediting their stay at the center.

**5. EMPLOYMENT RELATIONSHIP:** the Hybrid Professional Master's Degree shall not constitute an employment relationship of any kind.

**6. PRIOR EDUCATION:** Some centers may require a certificate of prior education for the Hybrid Professional Master's Degree. In these cases, it will be necessary to submit it to the TECH internship department so that the assignment of the chosen center can be confirmed.

**7. DOES NOT INCLUDE:** The Hybrid Professional Master's Degree will not include any element not described in the present conditions. Therefore, it does not include accommodation, transportation to the city where the internship takes place, visas or any other items not listed.

However, students may consult with their academic tutor for any questions or recommendations in this regard. The academic tutor will provide the student with all the necessary information to facilitate the procedures in any case.

08

# Where Can I Do the Clinical Internship?

The physician could perform their internship in a center of great prestige in the field of traumatology, having access to the latest technology for the diagnosis and monitoring of this type of injury. In addition, they will be accompanied throughout the 3 weeks of the internship by specialists from the clinic itself, who will guide them through the entire process of professional updating.





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*You will have access to prestigious clinical centers in the field of traumatology thanks to this Hybrid Professional Master's Degree”*



The student will be able to complete the internship of this Hybrid Professional Master's Degree at the following centers:



Medicine

### Clínica Corachan Nord

Country	City
Spain	Barcelona

Address: C/ de les Tres Torres, 7 08017 Barcelona

Private clinic specializing in Internal Medicine, Pediatrics, Dermatology, Cardiology, Pneumology and Allergology

**Related internship programs:**

- Advanced Operating Room Nursing
- Trauma Emergencies



Medicine

### Hospital HM Modelo

Country	City
Spain	La Coruña

Address: Rúa Virrey Osorio, 30, 15011, A Coruña

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

**Related internship programs:**

- Anaesthesiology and Resuscitation
- Palliative Care



Medicine

### Hospital Maternidad HM Belén

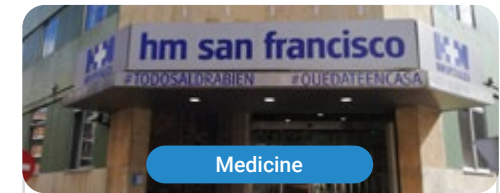
Country	City
Spain	La Coruña

Address: R. Filantropía, 3, 15011, A Coruña

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

**Related internship programs:**

- Update in Assisted Reproduction
- Hospitals and Health Services Management



Medicine

### Hospital HM San Francisco

Country	City
Spain	León

Address: C. Marqueses de San Isidro, 11, 24004, León

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

**Related internship programs:**

- Update in Anesthesiology and Resuscitation
- Trauma Nursing



Medicine

### Hospital HM Regla

Country	City
Spain	León

Address: Calle Cardenal Landázuri, 2, 24003, León

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

**Related internship programs:**

- Update on Psychiatric Treatment in Minor Patients



Medicine

### Hospital HM Nou Delfos

Country	City
Spain	Barcelona

Address: Avinguda de Vallcarca, 151, 08023 Barcelona

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

**Related internship programs:**

- Aesthetic Medicine
- Clinical Nutrition in Medicine



Medicine

### Hospital HM Madrid

Country	City
Spain	Madrid

Address: Pl. del Conde del Valle de Súchil, 16, 28015, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

**Related internship programs:**

- Palliative Care
- Anaesthesiology and Resuscitation



Medicine

### Hospital HM Montepíncipe

Country	City
Spain	Madrid

Address: Av. de Montepíncipe, 25, 28660, Boadilla del Monte, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

**Related internship programs:**

- Palliative Care
- Aesthetic Medicine





Medicine

### Hospital HM Torrelodones

Country	City
Spain	Madrid

Address: Av. Castillo Olivares, s/n, 28250, Torrelodones, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

**Related internship programs:**

- Anaesthesiology and Resuscitation
- Palliative Care



Medicine

### Hospital HM Sanchinarro

Country	City
Spain	Madrid

Address: Calle de Oña, 10, 28050, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

**Related internship programs:**

- Anaesthesiology and Resuscitation
- Palliative Care



Medicine

### Hospital HM Puerta del Sur

Country	City
Spain	Madrid

Address: Av. Carlos V, 70, 28938, Móstoles, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

**Related internship programs:**

- Palliative Care
- Clinical Ophthalmology



Medicine

### Hospital HM Vallés

Country	City
Spain	Madrid

Address: Calle Santiago, 14, 28801, Alcalá de Henares, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

**Related internship programs:**

- Gynecologic Oncology
- Clinical Ophthalmology

09

# Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning**.

This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.







“

*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

## At TECH we use the Case Method

What should a professional do in a given situation? Throughout the program, students will face multiple simulated clinical cases, based on real patients, in which they will have to do research, establish hypotheses, and ultimately resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

*With TECH you will experience a way of learning that is shaking the foundations of traditional universities around the world.*



According to Dr. Gérvas, the clinical case is the annotated presentation of a patient, or group of patients, which becomes a "case", an example or model that illustrates some peculiar clinical component, either because of its teaching power or because of its uniqueness or rarity. It is essential that the case is based on current professional life, trying to recreate the real conditions in the physician's professional practice.

“

*Did you know that this method was developed in 1912, at Harvard, for law students? The case method consisted of presenting students with real-life, complex situations for them to make decisions and justify their decisions on how to solve them. In 1924, Harvard adopted it as a standard teaching method”*

The effectiveness of the method is justified by four fundamental achievements:

1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.



## Relearning Methodology

At TECH we enhance the case method with the best 100% online teaching methodology available: Relearning.

This university is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, a real revolution with respect to the mere study and analysis of cases.

*Professionals will learn through real cases and by resolving complex situations in simulated learning environments. These simulations are developed using state-of-the-art software to facilitate immersive learning.*





At the forefront of world teaching, the Relearning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best online university (Columbia University).

With this methodology, more than 250,000 physicians have been trained with unprecedented success in all clinical specialties regardless of surgical load. Our pedagogical methodology is developed in a highly competitive environment, with a university student body with a strong socioeconomic profile and an average age of 43.5 years old.

*Relearning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.*

In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

The overall score obtained by TECH's learning system is 8.01, according to the highest international standards.



This program offers the best educational material, prepared with professionals in mind:



#### Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.



#### Surgical Techniques and Procedures on Video

TECH introduces students to the latest techniques, the latest educational advances and to the forefront of current medical techniques. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch the videos as many times as you like.



#### Interactive Summaries

The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



#### Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.





#### Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, TECH presents real cases in which the expert will guide students, focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



#### Testing & Retesting

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.



#### Classes

There is scientific evidence on the usefulness of learning by observing experts. The system known as Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



#### Quick Action Guides

TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help students progress in their learning.





# 10 Certificate

The Hybrid Professional Master's Degree in Trauma Emergencies guarantees students, in addition to the most rigorous and up-to-date education, access to a Hybrid Professional Master's Degree diploma issued by TECH Global University.





“

*Successfully complete this program  
and receive your university qualification  
without having to travel or fill out  
laborious paperwork”*

This program will allow you to obtain your **Hybrid Professional Master's Degree diploma in Trauma Emergencies** endorsed by **TECH Global University**, the world's largest online university.

**TECH Global University** is an official European University publicly recognized by the Government of Andorra ([official bulletin](#)). Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international training framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of collaborative tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.

This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Hybrid Professional Master's Degree in Trauma Emergencies**

Course Modality: **Hybrid (Online + Clinical Internship)**

Duration: **12 months**

Certificate: **TECH Global University**

Recognition: **60 + 5 ECTS Credits**



\*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH Global University will make the necessary arrangements to obtain it, at an additional cost.

future  
health confidence people  
education information tutors  
guarantee accreditation teaching  
institutions technology learning  
community commitment  
personalized service information  
knowledge present quality  
development languages  
virtual classroom



## Hybrid Professional Master's Degree

Trauma Emergencies

Modality: Hybrid (Online + Clinical Internship)

Duration: 12 months

Certificate: TECH Global University

60 + 5 créditos ECTS

# Hybrid Professional Master's Degree

## Trauma Emergencies